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July 9, 1997

Mr. Thomas Teynor
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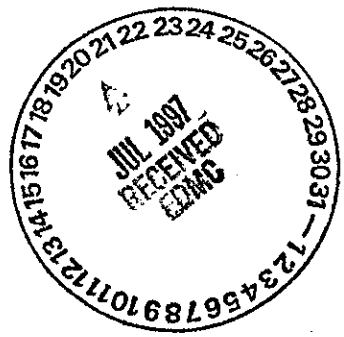

Messrs. Teynor & Winterhalder:

Re: Field Visit at the 340 Complex, 300 Area of Hanford

On May 6, 1997, the Washington State Department of Ecology (Ecology) conducted a field visit at the 340 complex. The purpose of the visit was to gather information and provide technical assistance to the U.S. Department of Energy (USDOE), its contractors, and Ecology's 300 Area Project Manager, Jeanne Wallace, in support of transition of the 340 complex to inactive status.

Enclosed are recommendations for addressing waste management and transitioning issues observed at the 340 complex during the field visit. I have provided Jeanne Wallace a copy of these recommendations as well. Please contact Ms. Wallace at (509) 736-3019 to further discuss these recommendations.

If you have any questions or concerns, please contact me at (509) 736-3031.

Sincerely,

Bob Wilson

Bob Wilson
Nuclear Waste Program

BW:rb
Enclosure

cc w/enclosure: Anna Beard, USDOE
James Rasmussen, USDOE
Gloria Williams, USDOE
Roger Szelmeczka, RFS
Mary Lou Blazek, ODOE
Administrative Record: 300-FF-1

Recommendations
from
May 6, 1997, Field Visit at the 340 Complex

- Section 5.0 of the Notice of Construction (NOC) for removal of sludge from the 340-A tanks states, "In the coming years (through calendar year 2001 and possibly beyond), the 340 complex will continue to serve as a less-than-90-day tanks storage unit for mixed waste generated on the Hanford Site." This statement contradicts statements made by Mr. Rogers and Mr. Szelmeczka who said the target date for cessation of waste management activities at the 340 complex was September 1998. This contradiction should be clarified and firm agreements reached with Ecology to cease operations in the 340 complex and address closure of the complex.

- The February 1997 NOC for removal of sludge from the 340-A tanks advise that the sludge in these six tanks has accumulated since the early 1980's. Appendix B-1 of the NOC describes the inventory waste constituents of the 340-A tank sludge as having been constructed from estimates of waste sent to the 340 vault tanks from 1991 through 1995. No sampling for chemical characteristics of the sludge has been performed. As a result, the constituent composition of the sludge is be poorly quantified and current data on the chemical composition of the sludge is a rough estimate at best. To support transitioning of the 340 building complex to shut down mode it is imperitive that a carefully prepared sampling and analysis plan be developed to ensure the sludge from each tank is adequately characterized for future management of these wastes and to ensure worker safety issues are addressed. It is essential that this sampling and analysis occur as soon as possible to also ensure wastes are safely stored in the interim.

- 340 complex personnel have estimated that approximately one inch of sludge remains in the 340-A tanks. It is critical that an accurate determination of the amount of sludge in the 340-A tanks be undertaken in the near term to ensure these tanks are maintained "empty" per Resource Conservation and Recovery Act (RCRA) standards and are not in fact storing waste.

- Tank #1 within the 340-A building appears to have grinding marks on it indicating some type of decontamination activity may have occurred in the past. Facility personnel did not appear to know why or when such an operation would have occurred, however, this may be in indication of past overfills or spills. I recommend that transitioning plans address the possibility of spills in the vicinity of tank #1 and that the facility demonstrate, through sampling of the floor areas if necessary, that chemical contamination had not occurred in this area or other portions of the 340-A building.

- Tanks #1 and #4 exhibit dark staining on their surfaces that appears to run down from the top of the tanks. Given that the tops of all the tanks in the 340-A building are crumpled from activities in the past, I recommend the chemical composition of this staining be determined and its relevance to past waste management be demonstrated. It should also be determined if this staining is composed of corrosion products or in any way is indicative of corrosion activities associated with these tanks.

- The 340 waste Handling Deactivation Plan (HNF), HNF-SD-LEF-001, Rev. 1, advises that deactivation of the Radioactive Liquid Waste System (RLWS) portion of the 340 complex may be postponed pending deactivation of the 324 and 327 laboratories. Any serious consideration for postponiing deactiviation of the 340 complex must include a written demonstration by USDOE that the waste volumes generated by the 324 and 327 laboratories justify continued operation of the 340 complex. This justification should include all options for transporting waste generated in 324 and 327 by other means other than the RLWS.

- If the 340 complex is to operate beyond 1998, I recommend further tank integrity testing of the 340 vault tanks be conducted to remedy inconclusive results described in section 4.6.2 of the September 30, 1996, "340 Waste Handling Facility Tank Integrity Assessment Report." Alternative technologies to the ultra sonic testing reported inconclusive in this report exist that may increase confidence for the continued use of the vault tanks.

340 complex management personnel said the waste management history of the 340-B building was not well documented and that some spills from previous activities have occurred. Currently rail cars are loaded out of the 340-B East portion of this building, but the west portion had been previously used extensively for waste handling of highly radioactive waste with diverse chemical components such as contained in fuels fabrication wastes which were transferred through the facility and may have contributed to spills in the past. In support of preparing the 340 complex for transition to shout down mode, I recommend a careful waste management history search be conducted by USDOE resulting in a report to Ecology with recommendations for sampling in and under the building made where applicable to ensure residual chemical contamination is not present.